

**Notice of Allowability**

Application No.

10/053,748

Examiner

John H. Le

Applicant(s)

BARFORD, LEE A.

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 05/12/2006.
2. ☒ The allowed claim(s) is/are 4-5, 7-10, 12-31, and 35-38.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |                                                                                                                     |                                                                                        |
|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892)                                                    | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment                               |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|                                                                                                                     | 9. <input type="checkbox"/> Other _____.                                               |

***Response to Rely/Amendment***

1. Applicant's amendment filed 05/12/2006 has been entered and carefully considered.

Claims 4-5, 7, 12, 31, 35, 36, and 38 have been amended.

Claims 1-3, 6, 11, and 32-34 have been cancelled.

***Reasons for Allowance***

2. Claims 4-5, 7-10, 12-31, and 35-38 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Please see the previous office action and applicant's argument filed on 08/09/2003, 02/17/2004, 01/12/2005, and 05/12/2006.

Regarding claim 5, in combination with other limitations of the claims, none of the prior art of record teaches or suggests the combination of a method of determining a revision of a test suite of a model-based diagnostic testing system, wherein the method comprising step of identifying a test to delete from the test suite that comprises: determining a probability of a correct diagnosis for a modified test suite using the database, the modified test suite having a selected test removed from the test suite; computing an efficacy value associated with the selected test using the determined probabilities of a correct diagnosis for the test suite and the modified test suite; and generating a list of deletable tests and associated efficacy values. It is these limitations as they are claimed in the combination with other limitations of claim, which have not

been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 7, in combination with other limitations of the claims, none of the prior art of record teaches or suggests the combination of a method of determining a revision of a test suite of a model-based diagnostic testing system, wherein the method comprising step of identifying a test to delete from the test suite, the deletable test having a minimal effect on an overall diagnostic efficacy of the test suite, wherein identifying a test comprises: creating a simulation database of the test suite; determining a probability of a correct diagnosis for the test suite using the database; determining a probability of a correct diagnosis for a modified test suite using the database, wherein the modified test suite is the test suite having a selected test removed; computing an efficacy value for the modified test suite using the determined probabilities; and generating a list of deletable tests using the computed efficacy values. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 12, in combination with other limitations of the claims, none of the prior art of record teaches or suggests the combination of a method of evaluating a diagnostic efficacy of a test suite of a model based diagnostic testing system, wherein the method comprising step of simulating an application of the test suite to a device under test, the device under test comprising one or more components; and recording a probable result of the application in the simulation database, the simulation database

being represented by a table having a plurality of columns and a plurality of rows, the plurality of columns comprising a component pattern, a test result pattern, and a number of occurrences, wherein the component pattern encodes which component is good or bad, each component of the device under test being represented by a unique position number within the component pattern, wherein the test result pattern encodes which of the tests of the test suite failed or passed, each test in the test suite being represented by a unique position within the test result pattern, wherein the number of occurrences represents a number of times that a given combination of the component pattern and the test result pattern occurred during a simulation, the number of occurrences being an integer greater than or equal to zero, and wherein each row of the plurality of rows corresponds to a different unique pattern of good and bad components. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 36, in combination with other limitations of the claims, none of the prior art of record teaches or suggests the combination of a system that determines efficacy of a test suite of a model-based diagnostic testing system comprising: a computer program stored in the memory and executed by the processor, wherein the instructions that evaluate the test suite implement: determining a probability of a correct diagnosis for a modified test suite using the database, the modified test suite having a selected test removed from the test suite; and wherein using the determined probability comprises: computing an efficacy value for the modified test suite using the determined

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probability of a correct diagnosis for both the test suite and the modified test suite; and generating a list of tests to delete from the test suite based on the computed efficacy value. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Regarding claim 38, in combination with other limitations of the claims, none of the prior art of record teaches or suggests the combination of a system that determines efficacy of a test suite of a model-based diagnostic testing system comprising: a computer program stored in the memory and executed by the processor, wherein the instructions that evaluate the test suite implement one or both of suggesting a test to add to the test suite and identifying a test to delete from the test suite, wherein suggesting a test to add to the test suite and identifying a test to delete from the test suite each comprise a list of respective tests, the lists being represented in one or both of human readable form and machine-readable form. It is these limitations as they are claimed in the combination with other limitations of claim, which have not been found, taught or suggested in the prior art of record, that make these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Contact Information***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to John H. Le whose telephone number is 571 272 2275. The examiner can normally be reached on 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John E. Barlow can be reached on 571 272 2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John H. Le

Patent Examiner-Group 2863

August 23, 2006

**BRYAN BUI**  
**PRIMARY EXAMINER**

A handwritten signature in black ink, appearing to read 'B. Bui', with a long horizontal flourish extending to the right.